

I. AMENDMENTS

Claims 1-23 (canceled)

24. (currently amended) A fluid mixer to saturate liquids with gases comprising:
- a cylindrical donut housing having a fluid inlet;
- a ring having a plurality of grooves,
- the ring being concentric to the cylindrical donut housing,
- the ring having an outer diameter on a first end that is smaller than a diameter of the cylindrical donut housing, thus defining a distribution channel;
- a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves, the cylinder having a gas inlet to receive gas and a liquid outlet to discharge liquids;
- a porous gas diffuser disposed within the cylinder, ~~the diffuser having an impervious flat top and shaped as an inverted cone,~~
- the diffuser connected to a gas inlet; and
- a gas outlet for releasing excess gas.

25. (original) The fluid mixer of claim 24 in which the grooves in the ring are spiral.

26. (original) The fluid mixer of claim 24 in which the grooves in the ring are radial.

Claims 27-33 (cancelled)

34. (currently amended) A fluid mixer to mix multiple fluids comprising:
- an upper donut housing with a first fluid inlet, ~~the upper housing;~~
- a ring having a plurality of grooves,
- the ring being concentric to the upper donut housing,

the ring having an outer diameter on a first end that is smaller than a diameter of the donut housing thus defining a distribution channel;

an orifice ring adapted to inject a second liquid into the first liquid leaving the grooves;

and

a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves, a liquid outlet being located at a bottom of the cylinder.

35. (original) The fluid mixer of claim 34 in which the grooves are radial.
36. (original) The fluid mixer of claim 34 in which the orifice ring is a venturi-orifice ring.
37. (canceled)
38. (new) The fluid mixer of claim 24 further comprising an inlet gas-metering valve on the gas inlet.
39. (new) The fluid mixer of claim 38 further comprising an outlet gas-metering valve on the gas outlet.
40. (new) The fluid mixer of claim 39 in which the distribution channel is adapted for fluid flow in the clockwise and counterclockwise directions simultaneously.
41. (new) The fluid mixer of claim 40 having a mixing zone.
42. (new) The fluid mixer of claim 41 in which the diffuser further comprises an impervious flat top and shaped as an inverted cone.
43. (new) The fluid mixer of claim 36 further comprising a lower cylinder cap on a bottom of the cylinder.
44. (new) The fluid mixer of claim 37 further comprising a second fluid inlet in fluid communication with the orifice ring.

45. (new) A fluid mixer, comprising:
- a cylindrical donut housing having a first fluid inlet;
- a ring having a plurality of grooves,
- the ring being concentric to the cylindrical donut housing,
- the ring having an outer diameter on a first end that is smaller than a diameter of the cylindrical donut housing, thus defining a distribution channel; and
- a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves;
- a device to inject a second fluid into the mixer for mixing with the first fluid; and
- and a liquid outlet to discharge liquids.
46. (new) The fluid mixer of claim 45 wherein the second fluid is a gas, and the device to inject the second fluid into the mixer further comprises a gas inlet on the cylinder.
47. (new) The fluid mixer of claim 46 wherein the liquid outlet is on the cylinder.
48. (new) The fluid mixer of claim 47 further comprising a porous gas diffuser disposed within the cylinder, the diffuser having an impervious flat top and shaped as an inverted cone, the diffuser connected to the a gas inlet.
49. (new) The fluid mixer of claim 48 further comprising a gas outlet for releasing excess gas.
50. (new) The fluid mixer of claim 45 in which the first fluid is a first liquid.
51. (new) The fluid mixer of claim 50 in which the second fluid is a second liquid.
52. (new) The fluid mixer of claim 51 in which the device to inject is an orifice ring adapted to inject the second liquid into the first liquid leaving the the grooves of the ring.